WHAT IS CLAIMED IS:

1. A method for performing allocation of channelisation codes to channels in a Code Division Multiple Access (CDMA) system having the channelisation codes organised in a primary and zero or more secondary code trees, where each of the code trees has zero or more alternative code trees, each code tree having one or more channelisation codes per spreading factor, where the channelisation codes are according to their position in the code tree denoted consecutively by a code index with a lowest to a highest value per spreading factor within each code tree, and where the system deploys any combination of channels which may operate in a first Compressed Mode (CPM) type requiring reallocation of channels to a channelisation code with a lower spreading factor, and channels according to a second CPM type, which do not require reallocation, **characterised in that** the channel according to the first Compressed Mode type is allocated a channelisation code with a lowest code index out of a group of free channelisation codes for a certain spreading factor, and a channel according to the second Compressed Mode type is allocated a channelisation code with a highest code index out of the group of free channelisation codes for a certain spreading factor.

2. The method according to claim 1 wherein a request for allocation of a channelisation code for a channel encloses the type of CPM to be deployed.

3. The method according to claim 1, wherein the group of free channelisation codes for a certain spreading factor comprises channelisation codes from the primary code tree.

4. The method according to claim 3, wherein the group of free channelisation codes for a certain spreading factor also comprise channelisation codes from one or more secondary code trees.

5. The method according to claims 3 or 4, wherein the group of free channelisation codes for a certain spreading factor also comprise

channelisation codes from one or more alternative code trees, each of the alternative code trees being related to said primary or secondary code tree.

6. The method according to claim 5, wherein selection of a channelisation code from the group of free channelisation codes for a certain spreading factor from the primary code tree has precedence over a channelisation code from each of the alternative code trees, where the alternative code tree is related to the primary code tree.

7. The method according to claims 5 or 6, wherein selection of a channelisation code from the group of free channelisation codes for a certain spreading factor from the alternative code tree, where the alternative code tree is related to the primary code tree, has precedence over a channelisation code from the secondary code tree.

8. The method according to claims 5, 6 or 7, wherein selection of a channelisation code from the group of free channelisation codes for a certain spreading factor from the secondary code tree, has precedence over a channelisation code from an alternative code tree. where the alternative code tree is related to the secondary code tree.

9. The method according to claims 3 to 8, wherein the group of free channelisation codes do not include channelisation codes that are reserved.

10. The method according to claims 1 where the reallocation of a channelisation code is an occasion limited in time duration.

11. The method according to any of the preceding claims, comprising the steps of:

- determining the type of CPM of the channel which is to be allocated a channelisation code;

- selecting a channelisation code from the group of free channelisation codes with a lowest code index, hence starting from the left side of the primary code tree for allocating a channelisation code for a channel according to the first Compressed Mode type;

- selecting a channelisation code from the group of free channelisation codes with a highest code index, hence starting from the right side of the primary code tree for allocating a channelisation code for a channel according to the second Compressed Mode type.

12. The method according to claims 1 to 10, for allocating a channelisation code to a channel according to a first CPM type comprising the steps of:

- creating a list of candidate channelisation codes in the primary code tree which are free and not reserved;

- excluding from the list a candidate channelisation code, having a corresponding parent code at the associated alternative code tree which is not free;

- selecting and allocating a candidate channelisation code from the list with a lowest code index, hence from the left side of the code tree, on the primary code tree, if more than one candidate channelisation code exists in the primary code tree;

- reallocating a channel according to the second Compressed Mode type from the primary code tree to an alternative code tree if there is no candidate channelisation code on the list, and allocating the freed channelisation code to the channel according to the first CPM type;

- allocating a channelisation code from a new secondary code tree if insufficient free space is created through reallocation of channels according to the second CPM type.

13. The method according to claims 1 to 10, for allocating a channelisation code to a channel according to the second CPM type comprising the steps of:

- creating a list of candidate channelisation codes in the primary (or secondary) code tree which are free and not reserved;

- selecting and allocating a channelisation code from the list with a highest code index, hence from the right side of the code tree, on the primary (or secondary) code tree, if more than one candidate

exists in the primary (or secondary) code tree;

- creating a first alternative list, if no candidate channelisation code at the primary (or secondary) code tree exists, with candidate channelisation codes at a right side alternative code tree related to the primary (or secondary) code tree, which channelisation codes must be free and not reserved and with the restriction that the same channelisation code at the related primary (or secondary) code tree must be used by a channel according to the second CPM type;

- selecting and allocating the candidate channelisation code with the highest code index from said first alternative list if more than one candidate channelisation code exists;

- creating a second alternative list with candidate channelisation codes at a left alternative code tree, which alternative code is related to said primary code tree, if no candidate channelisation code at the right alternative code tree exists, which channelisation codes must be free and not reserved and the same channelisation code at the primary code tree must be used by a channel according to the second CPM type;

- selecting and allocating the candidate channelisation code with the highest code index from said second alternative list if more than one candidate channelisation code exists;

- allocating a channelisation code from a new secondary code tree if no candidate channelisation code at the left alternative code tree exists.

14. The method according to claims 11, 12 or 13, where the steps are deployed on, and related to, the primary code tree or the secondary code tree.

15. The method according to any of the preceding claims wherein the first CPM type is a Spreading Factor divide by 2 (SF/2) method, and the second CPM type is a Higher level scheduling (HLS) or puncturing method.

16. The method according to any of the preceding claims wherein the CDMA system is a WCDMA system

17. A Code Division Multiple Access (CDMA) system comprising radio base stations (RBS), radio base station controllers (RBC), radio network controllers (RNC) and mobile user equipment wherein the system deploys the method of claims 1, 11, 12, 13, 14 or 15.

18. A system according to claim 17, wherein the system is a system operating according to a Wideband CDMA (WCDMA) standard.

19. A radio base station (RBS), operating in a Code Division Multiple Access (CDMA) system, comprising electronic equipment, processing units, I/O circuitry and memory, configured to select and allocate channelisation codes, create and store lists with free and not reserved channelisation codes, reallocate channels, determine the CPM type of the channel requesting for a channelisation code, and apply the signalling between the elements requesting for allocation of a channelisation code to a channel and the elements performing the allocation of a channelisation code to a channel, according to the method of claims 1, 11, 12, 13, 14 or 15.

20. A device according to claim 19, wherein the device operates according to a Wideband CDMA (WCDMA) standard.

21. A radio base station controller (RBC), operating in a Code Division Multiple Access (CDMA) system, comprising electronic equipment, processing units, I/O circuitry and memory, configured to select and allocate channelisation codes, create and store lists with free and not reserved channelisation codes, reallocate channels, determine the CPM type of the channel requesting for a channelisation code, and apply the signalling between the elements requesting for allocation of a channelisation code to a channel and the elements performing the allocation of a channelisation code to a channel, according to the method of claims 1, 11, 12, 13, 14 or 15.

22. A device according to claim 21, wherein the device operates

according to a Wideband CDMA (WCDMA) standard.

23. A radio network controller (RNC), operating in a Code Division Multiple Access (CDMA) system, comprising electronic equipment, processing units, I/O circuitry and memory, configured to select and allocate channelisation codes, create and store lists with free and not reserved channelisation codes, reallocate channels, determine the CPM type of the channel requesting for a channelisation code, and apply the signalling between the elements requesting for allocation of a channelisation code to a channel and the elements performing the allocation of a channelisation code to a channel, according to the method of claims 1, 11, 12, 13, 14 or 15.

24. A device according to claim 23, wherein the device operates according to a Wideband CDMA (WCDMA) standard.